

REMARKS

Claims 1-27 were previously pending in this patent application. Claims 1-27 stand rejected. Herein, Claims 1, 10, and 19 have been amended. Support for the amendments is found on pages 22-24 of the Specification. Accordingly, after this Amendment and Response After Final Action, Claims 1-27 remain pending in this patent application. Further examination and reconsideration in view of the claims, remarks and arguments set forth below is respectfully requested.

35 U.S.C. Section 103(a) Rejections

Claims 1-5, 7, 9-14, 16, 18-23, 25, and 27 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Nilsson, *Introduction to PSpice Manual for Electronic Circuits Using OrCad Release 9.1* (hereafter Nilsson), in view of Lawman et al., U.S. Patent No. 5,673,198 (hereafter Lawman). These rejections are respectfully traversed.

Independent Claim 1 recites (as amended):

A method of API (application programming interface) generation for an electronic circuit comprising:
displaying a graphical user interface through which a user can **initiate generation** of said API, wherein **said user utilizes said API to customize functionality of said electronic circuit**,
selecting a component from a plurality of components for placement in said electronic circuit, said component representing an implementable function in said electronic circuit;

configuring said selected component via said graphical user interface;
storing descriptive data relative to said selected component and said configuration;
utilizing said interface to access said descriptive data; and
initiating said graphical user interface to invoke a processing of said descriptive data **causing an automatic generation** of said API, in response to a user input, said API comprising a device-interface and interrupt activity framework for source programming and for controlling said function of said component in said electronic circuit. (emphasis added)

It is respectfully asserted that the combination of Nilsson and Lawman does not teach, motivate, or suggest the present invention as recited in Independent Claim 1. In particular, Independent Claim 1 recites the limitations, "displaying a graphical user interface through which a user can **initiate generation** of said API, wherein **said user utilizes said API to customize functionality of said electronic circuit**," (emphasis added), and "**initiating said graphical user interface** to invoke a processing of said descriptive data **causing an automatic generation** of said API," (emphasis added). At page 3 of the Final Office Action, it is stated that Nilsson teaches a program which provides an interface for use in simulating electronic circuits, and teaches a system processing the descriptive data of the completed circuit and automatically generating an Interface (such as the netlist, later displayed in Pspice A/D window). According to the Final Office Action, the phrase "Interface (such as the netlist...)" is intended to correspond to the API recited in Independent Claim 1. However, Nilsson clearly points out that in order for Pspice to understand the

circuit schematic drawn, the circuit schematic must be translated into a collection of statements that identify the circuit components, their attributes, and their topological connections, wherein the collection of statements is called a netlist and it is written to an output file. [Nilsson; pages 7 and 11]. That is, Nilsson fails to teach, motivate, or suggest an API and generation of the API (wherein the user utilizes the API to customize functionality of the electronic circuit) since the displayed netlist is utilized by the Pspice software to perform the analysis instead of being utilized by a user to customize functionality of the electronic circuit, as in the invention of Independent Claim 1. Moreover, in Nilsson, the user only sees the displayed netlist in an output file after completion of the analysis and is not able to utilize the netlist itself.

Furthermore, Lawman is directed to an instruction memory (19) that stores a graphic user interface, an application program Interface (API), a partition, place, and route (PPR) message and data analyzer, and a partition, place and route process. [Lawman; Col. 5, lines 13-25]. According to Lawman, as the logic circuit is being designed using the graphic user interface, the API process generates messages about changes in the design for sending to the partition, place, and route process. [Lawman; Col. 5, lines 32-35]. That is, an API exists in the instruction memory (19) instead of being automatically generated in response to a user input, as in the invention of Independent Claim 1. Lawman fails to teach, motivate, or suggest displaying a graphical user interface through

which a user can initiate generation of the API and initiating the graphical user interface...causing an automatic generation of the API, as in the invention of Independent Claim 1.

Thus, the combination of Nilsson and Lawman does not teach, motivate, or suggest all the limitations of Independent Claim 1. Moreover, it is stated in the Final Office Action at page 4 that "Lawman further specifies user input causing the API to generate the GUI...which would be an effective way of GUI generation for Nilsson," (emphasis added). In contrast, the invention of Independent Claim 1 is directed to displaying a graphical user interface through which a user can initiate generation of the API and initiating the graphical user interface...causing an automatic generation of the API. Therefore, it is respectfully submitted that Independent Claim 1 is patentable over the combination of Nilsson and Lawman and is in condition for allowance.

Dependent Claims 2-5, 7, and 9 are dependent on allowable Independent Claim 1, which is allowable over the combination of Nilsson and Lawman. Hence, it is respectfully submitted that Dependent Claims 2-5, 7, and 9 are patentable over the combination of Nilsson and Lawman for the reasons discussed above.

With respect to Independent Claims 10 and 19, it is respectfully submitted that Independent Claims 10 and 19 recite similar limitations as in Independent Claim 1. In particular, Independent Claims 10 and 19 include limitations directed to displaying a graphical user interface through which a user can initiate the generation of an API (application programming interface), wherein the user utilizes the API to customize functionality of an electronic circuit, and directed to initiating the graphical user interface to invoke a processing of the descriptive data causing an automatic generation of the API. As discussed above, the combination of Nilsson and Lawman fails to teach, suggest, or motivate the cited limitations. Therefore, Independent Claims 10 and 19 are allowable over the combination of Nilsson and Lawman for reasons discussed in connection with Independent Claim 1.

Dependent Claims 11-14, 16, and 18 and Dependent Claims 20-23, 25, and 27 are dependent on allowable Independent Claims 10 and 19, respectively, which are allowable over the combination of Nilsson and Lawman. Hence, it is respectfully submitted that Dependent Claims 11-14, 16, and 18 and Dependent Claims 20-23, 25, and 27 are patentable over the combination of Nilsson and Lawman for the reasons discussed above.

Claims 6, 15, and 24 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Nilsson, *Introduction to PSpice Manual for Electronic Circuits Using OrCad Release 9.1* (hereafter Nilsson), in view of Lawman et al., U.S. Patent No. 5,673,198 (hereafter Lawman), and in view of Hsu, U.S. Patent No. 6,138,270 (hereafter Hsu). These rejections are respectfully traversed.

Dependent Claims 6, 15, and 24 are dependent on allowable Independent Claims 1, 10, and 19, respectively, which are allowable over the combination of Nilsson and Lawman. Moreover, Hsu does not teach, motivate, or suggest displaying a graphical user interface through which a user can initiate generation of the API, wherein the user utilizes the API to customize functionality of the electronic circuit, and does not teach, motivate, or suggest initiating the graphical user interface to invoke a processing of the descriptive data causing an automatic generation of the API, as in the invention of Independent Claims 1, 10, and 19. Hence, it is respectfully submitted that Independent Claims 1, 10, and 19 are patentable over the combination of Nilsson, Lawman, and Hsu for the reasons discussed above. Since Dependent Claims 6, 15, and 24 depend from Independent Claims 1, 10, and 19, respectively, it is respectfully submitted that Dependent Claims 6, 15, and 24 are patentable over the combination of Nilsson, Lawman, and Hsu for the reasons discussed above.

Claims 8, 17, and 26 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Nilsson, *Introduction to PSpice Manual for Electronic Circuits Using OrCad Release 9.1* (hereafter Nilsson), in view of Lawman et al., U.S. Patent No. 5,673,198 (hereafter Lawman), and in view of McDonald, U.S. Patent No. 6,530,065 (hereafter McDonald). These rejections are respectfully traversed.

Dependent Claims 8, 17, and 26 are dependent on allowable Independent Claims 1, 10, and 19, respectively, which are allowable over the combination of Nilsson and Lawman. Moreover, McDonald does not teach, motivate, or suggest displaying a graphical user interface through which a user can initiate generation of the API, wherein the user utilizes the API to customize functionality of the electronic circuit, and does not teach, motivate, or suggest initiating the graphical user interface to invoke a processing of the descriptive data causing an automatic generation of the API, as in the invention of Independent Claims 1, 10, and 19. Hence, it is respectfully submitted that Independent Claims 1, 10, and 19 are patentable over the combination of Nilsson, Lawman, and McDonald for the reasons discussed above. Since Dependent Claims 8, 17, and 26 depend from Independent Claims 1, 10, and 19, respectively, it is respectfully submitted that Dependent Claims 8, 17, and 26 are patentable over the combination of Nilsson, Lawman, and McDonald for the reasons discussed above.

CONCLUSION

It is respectfully submitted that the above claims, remarks, and arguments overcome all rejections. All remaining claims (Claims 1-27) are neither anticipated nor obvious in view of the cited references. For at least the above-presented reasons, it is respectfully submitted that all remaining claims (Claims 1-27) are in condition for allowance.

The Examiner is urged to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

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Respectfully submitted,

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